

Application No.: 09/899,994  
Amendment under 37 CFR 1.111  
Reply to Office Action dated June 14, 2004  
September 14, 2004

AMENDMENTS TO THE CLAIMS

Please substitute the following claims for the pending claims with the same numbers respectively:

Claim 1 (Currently amended): A signal processing device which decodes a data stream which includes a first audio data and a second audio data sampled at different respective sampling frequencies of  $fs_1$  and  $fs_2$ , where  $fs_1 < fs_2$ , comprising:

a decoder ~~which is inputted said data stream and separates~~  
for receiving and separating said data stream into said first audio data and said second audio data and for outputting said first audio data and said second audio data;

a filter ~~which, among said first and second audio data outputted from said decoder, performs~~ for performing re-sampling upon said first audio data at the same sampling frequency  $fs_2$  as that of said second audio data, and ~~suppresses~~ suppressing aliasing distortion due to said re-sampling, and for outputting said first audio data from said filter; and

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a delay unit ~~which, among said first and second audio data~~  
~~outputted from said decoder, delays~~ for delaying said second  
audio data by a delay period equal to a processing period due to  
said filter, and for outputting said second audio data  
concurrently with said first audio data.

Claim 2 (Original): A signal processing device according to  
claim 1, wherein said decoder separates said data stream,  
processing unit thereof corresponding to said processing period  
in said filter, into said first and second audio data having  
original sampling frequencies, respectively.

Claim 3 (Original): A signal processing device according to  
claim 1, wherein signal processing delay time in said filter  
corresponds to a predetermined processing unit of inputted audio  
data.

Claim 4 (Currently amended): A signal processing device  
according to claim 1, wherein said filter comprises:

a re-sampling circuit ~~which, among the first and second~~  
~~audio data which are outputted from said decoder, performs~~ for

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performing re-sampling upon said first audio data having said sampling frequency ~~of~~  $fs_1$  at said sampling frequency  $fs_2$  as that of said second audio data; and

an FIR filter which suppresses aliasing distortion in said first ~~of~~ audio data.

Claim 5 (Currently amended): A signal processing device according to claim 1, wherein said second ~~stream of~~ audio data includes at least audio data for a forward right channel and audio data for a forward left channel.

Claim 6 (Currently amended): A signal processing device according to claim 2, wherein said second ~~stream of~~ audio data includes at least audio data for a forward right channel and audio data for a forward left channel.

Claim 7 (Currently amended): A signal processing device according to claim 3, wherein said second ~~stream of~~ audio data includes at least audio data for a forward right channel and audio data for a forward left channel.

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Claim 8 (Original): A signal processing device according to claim 1, wherein said sampling frequency fs1 is one of 48 kHz and 44.1 kHz, and said sampling frequency fs2 is twice as high as said sampling frequency fs1.

Claim 9 (Original): A signal processing device according to claim 2, wherein said sampling frequency fs1 is one of 48 kHz and 44.1 kHz, and said sampling frequency fs2 is twice as high as said sampling frequency fs1.

Claim 10 (Original): A signal processing device according to claim 3, wherein said sampling frequency fs1 is one of 48 kHz and 44.1 kHz, and said sampling frequency fs2 is twice as high as said sampling frequency fs1.

Claim 11 (Currently amended): A signal processing device according to claim 1, wherein:

said second ~~stream~~ of audio data includes at least audio data for a forward right channel and audio data for a forward left channel;

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said sampling frequency fs1 is one of 48 kHz and 44.1 kHz;  
and

said sampling frequency fs2 is twice as high as said  
sampling frequency fs1.

Claim 12 (Currently amended): A signal processing method  
which decodes a data stream which includes a first audio data and  
a second audio data sampled at different respective sampling  
frequencies of fs1 and fs2, where  $fs1 < fs2$ , said method comprising  
the steps of:

a decoding ~~step of inputting said the~~ data stream and  
separating ~~said the~~ data stream into ~~said the~~ first audio data  
and ~~said the~~ second audio data and outputting the first audio  
data and the second audio data;

a filtering ~~step of, among said first and second audio data~~  
~~outputted from said decoding step, performing~~ the first audio  
data by re-sampling upon said first audio data at the same  
sampling frequency fs2 as that of ~~said the~~ second audio data, and  
suppressing aliasing distortion ~~due to~~ in the first audio data  
obtained following said step of re-sampling, and outputting the  
first audio data; and

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~~a delay processing step of, among said first and second~~  
~~audio data outputted from said decoder,~~ delaying said the second  
audio data by a delay period equal to a processing period due to  
said step of filtering step to output the second audio data  
concurrently with the first audio data.

Claim 13 (Currently amended): A signal processing method  
according to claim 12, wherein said step of decoding ~~step~~  
separates said the data stream, ~~processing unit thereof~~  
~~corresponding to said processing period in said filter step,~~ into  
said the first and second audio data having original sampling  
frequencies, respectively.

Claim 14 (Currently amended): A signal processing method  
according to claim 12, wherein said a processing period in said  
step of filtering ~~step~~ corresponds to a predetermined processing  
unit of inputted audio data.

Claim 15 (Currently amended): A signal processing method  
according to claim 12, wherein said step of filtering ~~step~~  
comprises:

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~~a re-sampling step of, among the first and second audio data~~  
~~outputted from said decoding step, performing re-sampling upon~~  
the first audio data having ~~said the~~ said sampling frequency of fs1 at  
the ~~said same~~ said sampling frequency fs2 as that of the second audio  
data, and ~~a filtering step of~~ suppressing aliasing distortion in  
~~said the~~ said first audio data.

Claim 16 (Currently amended): A signal processing method  
according to claim 12, ~~wherein said~~ further comprising the step  
of providing the second ~~stream of~~ audio data ~~includes~~ with at  
least audio data for a forward right channel and audio data for a  
forward left channel.

Claim 17 (Currently amended): A signal processing method  
according to claim 12, wherein said step of filtering includes  
using the sampling frequency fs1 ~~is~~ from at least one of 48 kHz  
and 44.1 kHz, and said step of delaying includes using the  
sampling frequency fs2 which is twice ~~said the~~ said sampling frequency  
fs1.

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Claim 18 (Currently amended): A signal processing method according to claim 12, ~~wherein: said~~ further comprising the step of providing the second audio data ~~includes~~ with at least audio data for a forward right channel and audio data for a forward left channel;

~~said~~ and wherein step of filtering includes using the sampling frequency  $fs1$  ~~is~~ from at least one of 48 kHz and 44.1 kHz; and

said step of delaying includes using the sampling frequency  $fs2$  which is twice as high as ~~said~~ the sampling frequency  $fs1$ .

Claim 19 (Original): An optical disk reproducing device which reproduces multi-channel audio signals using a signal processing device according to claim 8, when reproducing an optical disk upon which said first and second audio data, which have been sampled at respective different sampling frequencies  $fs1$  and  $fs2$  with  $fs1 < fs2$ , have been recorded as a single stream of audio data.